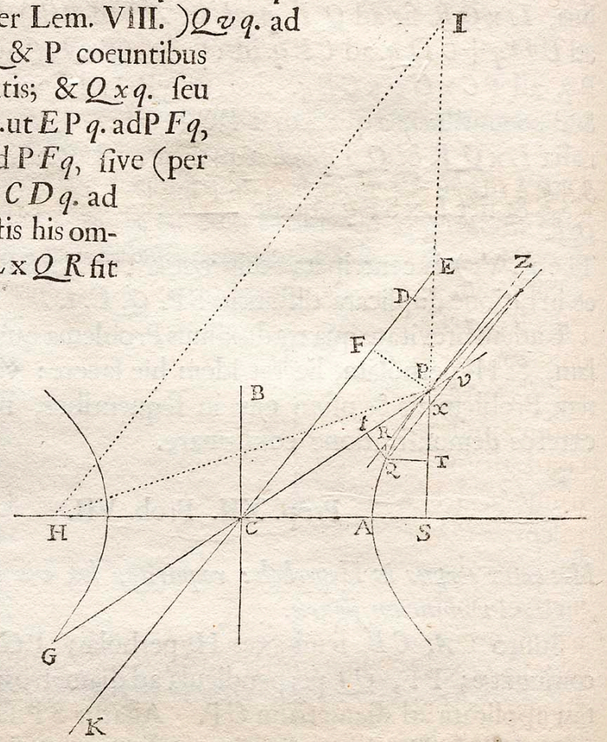
demittatur perpendicularis QT. Et Hyperbolæ latere recto principali (ſeu $\frac{2BCq}{AC}$) dicto L, erit $L \times QR$ ad $L \times Pv$ ut QR ad Pv, id eſt, ut PE (ſeu AC) ad PC; Et $L \times Pv$ ad $Gv P$ ut L ad Gv; & $Gv P$ ad Qvq. ut CPq. ad CDq; & (per Lem. VIII.) Qvq. ad Qxq, punctis Q & P coeuntibus fit ratio æqualitatis; & Qxq. ſeu Qvq. eſt ad QTq. ut EPq. ad PFq, id eſt ut CAq. ad PFq, ſive (per Lem. XII.) ut CDq. ad CBq: & conjunctis his omnibus rationibus $L \times QR$ fit ad QTq. ut AC ad $PC + L$ ad $Gv + CPq$. ad $CDq. + CDq$. ad CBq: id eſt ut $AC \times L$ (ſeu $2BCq$.) $\times PCq$. ad $PC \times Gv \times CB$ *quad.* ſive ut $2PC$ ad Gv, ſed punctis Q & P coeuntibus æquantur $2PC$ & Gv. Ergo & his proportionalia $L \times QR$ & QTq. æquantur. Ducantur hæc æqualia in $\frac{SPq.}{QR}$ & fiet $L \times SPq$. æquale $\frac{SPq \times QTq}{QR}$ Ergo (per Corol. Theor. V.) vis centripeta reciproce eſt ut $L \times SPq$, id eſt in ratione duplicata diſtantiæ SP. *Q. E. I.*



Eo-

Eodem modo demonſtratur quod corpus, hac vi centripeta in centrifugam verſa, movebitur in Hyperbola conjugata.

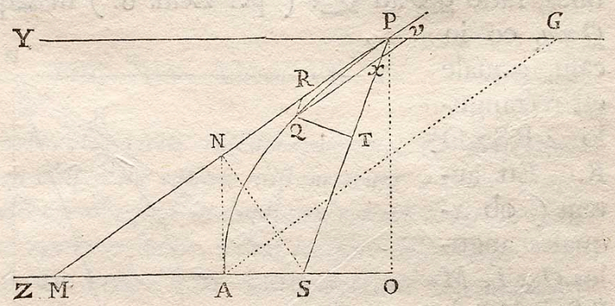
Lemma XIII.

Latus rectum Parabolæ ad verticem quemvis pertinens, eſt quadruplum diſtantiæ verticis illius ab umbilico figuræ. Patet ex Conicis.

Lemma XIV.

Perpendiculum quod ab umbilico Parabolæ ad tangentem ejus demittitur, medium eſt proportionale inter diſtantias umbilici a puncto contactus & a vertice principali figuræ.

Sit enim APQ Parabola, S umbilicus ejus, A vertex principalis, P punctum contactus, PO ordinatim applicata ad diametrum principalem, PM tangens diametro principali occurrens in M, & SN linea perpendicularis ab umbilico in tangentem. Jungatur AN, & ob æquales MS & SP, MN & NP, MA & AO, parallelæ erunt rectæ AN & OP, & inde triangulum SAN rectangulum erit ad A & ſimile triangulis æqualibus SMN, SPN, Ergo PS eſt ad SN ut SN ad SA. *Q. E. D.*



Corol. 1. PSq. eſt ad SNq. ut PS ad SA.

Corol. 2. Et ob datam SA, eſt SNq. ut PS.

Corol. 3. Et concurſus tangentis cujuſvis PM cum recta SN quæ ab umbilico in ipſam perpendicularis eſt, incidit in rectam AN, quæ Parabolam tangit in vertice principali.

Prop

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